

Exhibit 19: MS4 Dry Weather Discharge Characterization Study Scope of Work

A. Dry Weather Characterization

A.1 Dry Weather Characterization Locations

The consultant shall assist ADOT with dry weather characterization at the following selected outfall locations:

- 101-51.07, Salt River at Loop 101 S. bank; east of 101 under 202 interchange, Latitude 33° 26' 16" N and Longitude -111° 53' 26" W.
- 10-130.3, Agua Fria River I-10 ½ mi. W. of El Mirage Rd. & 100' N. of I-10, Latitude 33° 27' 33" N and Longitude -112° 19' 49" W.
- 10-145.17 Salt River I-10 N. bank; west side of Central Ave., Latitude 33° 25' 24" N and Longitude -112° 4' 25" W.
- 101-7.76 New River Loop 101 ¼ mi. S. of Northern Ave. & 1000' W. of 99th Ave. Latitude 33° 32' 55" N and Longitude -112° 16' 34" W.
- 10-149.18 Salt River I-10 N. bank; east side of 20th St., Latitude 33° 25' 3" N and Longitude -112° 2' 21" W.
- 153-1.64 Salt River SR 153 S. bank; west of expressway, Latitude 33° 25' 47" N and Longitude -111° 58' 53" W.
- 202-3.57 Salt River Loop 202 Directly under Loop 202/SR143 interchange, Latitude 33° 27' 29" N and Longitude -111° 58' 57" W.

The consultant will only conduct dry weather characterization for the above listed outfalls if a dry weather flow is present. Field verification of a dry weather flow presence will be verified by consultant and ADOT.

A.2 Dry Weather Characterization/Field Screening

Consultant shall collect two grab samples from each location listed in Section A.1 within a 24-hour period with a minimum period of four hours between samples. For each sample collected a narrative description of the color, odor, turbidity, the presence of oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided. In addition, a narrative description of the results of a field analysis using test kits to estimate pH, ammonia, total chlorine, total copper, total phenol, detergents (or surfactants), water temperature, and air temperature shall be provided along with a description of the flow rate.

A.3 Reporting Summary of Dry Weather Characterization

Consultant will provide a summary of each sampling conducted for the listed outfalls in Section A.1. This summary will include the results of all field parameter testing, a comparison of the two

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grab samples results for each outfall, site map identifying the sampling location, comparison to water quality standards (if any), discussion of the characterization results, and a general identification of entities or sources discharging into ADOT's system.

A.4 Schedule for Completing Dry Weather Characterization

Consultant shall complete the dry weather characterization no later than January 31, 2005. A draft report will be prepared and ready for review no later than February 17. All comments will be incorporated in the final report and finalized no later than March 1, 2005.

B. Watershed Boundary Mapping

B.1 Outfalls for Watershed Boundary Mapping

The consultant will map the watershed boundaries for the following listed outfalls:

- 101-51.07, Salt River at Loop 101 S. bank; east of 101 under 202 interchange,
- 10-130.3, Agua Fria River I-10 ½ mi. W. of El Mirage Rd. & 100' N. of I-10,
- 10-145.17 Salt River I-10 N. bank; west side of Central Ave.,
- 101-7.76 New River Loop 101 ¼ mi. S. of Northern Ave. & 1000' W. of 99th Ave.,
- 10-149.18 Salt River I-10 N. bank; east side of 20th St.,
- 153-1.64 Salt River SR 153 S. bank; west of expressway,
- 202-3.57 Salt River Loop 202 directly under Loop 202/SR143 interchange.

B.2 Mapping of Watershed Boundaries

The consultant will map the watershed boundaries for the outfalls referenced in Section B.1. Watershed mapping shall include those areas that contribute draining to the listed outfalls. A USGS topographic map (7.5 minute series with 1:24000 scale) will be utilized to identify watershed boundary areas. Additionally, municipalities will be identified that are within the drainage area of each watershed.

B.3 Final Deliverables for Watershed Boundary Mapping

Deliverables will include hard copy paper map of watershed boundary for each of the outfalls identified in Section B.1. A narrative description of each outfall's flow path to the waters of the U.S. and any impaired or not attaining waters will be provided. Additionally, any best management practices (BMP's) located along the flow path for each outfall will be provided. Consultant will include outfall locations, municipal boundaries, and ADOT roadways on draft and final map copies. Consultant will also provide GIS shape files of the drainage areas at delivery of final hard copy maps.